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EXAMINER

STULTZ, JESSICA T

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2873

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/549,646	Applicant(s) KASSENAAAR, TEUNIS ADRIANUS	
	Examiner Jessica T. Stultz	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 1, 4-7, 10 and 16 are objected to because of the following informalities: claim 1, line 2, “and detachable locking” should be “and a detachable locking”; claim 4, lines 1-2, “comprising coupling structure” should be “comprising a coupling structure”; claim 5, line 1, “according to claim 14” should be “according to claim 1”; claim 6, line 1, “according to claim 41” should be according to claim 1”, claim 7, line 1, “according to claim 14” should be according to claim 1”; claim 10, line 3, “and locking structure” should be “and a locking structure”; claim 16, line 3, “and locking structure” should be “and a locking structure”, and claim 16, line 7, “wherein the coupling structure” should be “wherein a coupling structure”, since there is no previous mention of a coupling structure within the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically regarding claim 4, the phrase “allows movement of the lens holder with respect to the foot in an axial direction on rotation of the lens holder and the foot” since is not clear is the intended meaning is “allows movement of the lens holder with respect to the foot in an axial direction while preventing any rotation of the lens holder with respect to the foot” or

Art Unit: 2873

“allows movement of the lens holder with respect to the foot in an axial direction while rotating the lens holder and the foot”. For purposes of examination the assumed meaning is “allows movement of the lens holder with respect to the foot in an axial direction while preventing any rotation of the lens holder with respect to the foot”.

Examiner's Comments

For applicant's information, the amendments to claims 1-10 and newly added claims 11-20 have been reviewed and support was found in the specification and drawings for these limitations.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9 and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Randmae US 5,032,919, herein referred to as Randmae '919.

Regarding claim 1, Randmae '919 discloses an imaging module (Abstract), comprising: a lens holder (Column 2, lines 41-52, wherein the lens holder is “16”, Figure 5) holding a lens (Figure 5, wherein the lens holder “16” holds a lens, not labeled); a foot (Column 2, lines 53-59, wherein the foot is carrier “22”, Figure 5) holding an image sensor chip (“20”, Figure 5); and a detachable locking structure (Column 3, line 3-Column 4, line 20, wherein the locking structure comprise cam followers “42” of carrier “22” and openings “60” of lens holder “16”, Figure 5) for fixing a mutual position of the lens holder (“16”) and the foot (“22”) with respect to each

Art Unit: 2873

other in at least one direction (Column 3, line 3-Column 4, line 20, wherein the cam followers “42” and openings “60” fix the position of the carrier “22” with respect to the lens holder “16”, Figure 5), wherein the locking structure allows the foot to slide along an inner surface of the lens holder while preventing any rotation of the foot with respect to the lens holder (Column 3, line 3-Column 4, line 20, wherein the cam followers “42” slide within openings “60” and allow at least an inner portion of carrier “22” to slide along an inner surface of the lens holder “16”, without rotation of the foot “22” with respect to lens holder “16”, Figures 2 and 5).

Regarding claim 2, Randmac ‘919 further discloses that the locking structure (“42” and “60”) utilizes a snap connection between the lens holder (“16”) and the foot (“22”) (Column 3, line 3-Column 4, line 20, wherein the cam followers “42” fit within T openings “60” in a snap connection to fix a rotational position of the carrier “22” within lens holder “16”, Figure 5).

Regarding claim 4, Randmac ‘919 further discloses comprising coupling structure (Column 3, line 3-Column 4, line 20, wherein the coupling structure comprise slots “46” of the focusing ring portion of the lens holder which couple with cam followers “42”, Figure 5) for coupling the lens holder and the foot, wherein the coupling structure allows movement of the lens holder with respect to the foot in an axial direction while preventing any rotation of the lens holder with respect to the foot (Column 3, line 3-Column 4, line 20, wherein the coupling structure allows movement of the lens holder “16” with respect to foot “22” in an axial direction, while maintaining the lens holder a fixed rotational position with respect to the foot, Figures 2 and 5).

Regarding claim 5, Randmac ‘919 further discloses that the lens holder has a cup-like structure defined by an annular wall and a base (Column 2, lines 41-59, wherein the lens holder

Art Unit: 2873

"16" comprises an inner wall including inner threads "18" and a base comprising the most leftward portion of lens mount "16", Figures 2 and 5), wherein the base has an opening therethrough (Shown in Figures 2 and 5), and wherein the lens is positioned in an inner volume of the lens holder against the base and adjacent to the opening (Column 2, lines 41-59, wherein the lens, not shown, is held in the inner wall and adjacent to the opening by threads "18", Figures 2 and 5).

Regarding claim 6, Randmae '919 further discloses that the locking structure is allows movement of the lens holder and foot with respect to each other in an axial direction (Column 3, line 3-Column 4, line 20, wherein the cam followers "42" and slots "60" allow movement of lens holder and foot with respect to each other in an axial direction, Figure 5).

Regarding claim 7, Randmae '919 further discloses that the coupling structure comprises a flange (Figure 5, wherein the flanges are the ridges of ribs "42") on the foot ("22") as well as a flange on the lens holder (Column 3, line 3-Column 4, line 20, wherein the flange on the lens holder comprises ramps "44" of a focusing ring portion of the lens holder, Figures 2 and 5), wherein both flanges comprise a contact surface (Figure 2, wherein the ramps "44" abut against the ridges of ribs "42") and wherein the contact surfaces abut against each other when the lens is at a maximum axial distance from the image sensor chip (Figures 2 and 5).

Regarding claim 8, Randmae '919 further discloses that the contact surface of at least one of the flanges is inclined with respect to a plane extending perpendicular to an axial direction (Figure 5, wherein the ramps "44" are inclined as claimed).

Regarding claim 16, Randmae '919 discloses an imaging module (Abstract), comprising: a lens holder (Column 2, lines 41-52, wherein the lens holder is "16", Figure 5) holding a lens

Art Unit: 2873

(Figure 5, wherein the lens holder “16” holds a lens, not labeled); a foot (Column 2, lines 53-59, wherein the foot is carrier “22”, Figure 5) holding an image sensor chip (“20”, Figure 5); and a locking structure (Column 3, line 3-Column 4, line 20, wherein the locking structure comprise cam followers “42” of carrier “22” and openings “60” of lens holder “16”, Figure 5) for fixing a mutual position of the lens holder (“16”) and the foot (“22”) with respect to each other in at least one direction (Column 3, line 3-Column 4, line 20, wherein the cam followers “42” and openings “60” fix the position of the carrier “22” with respect to the lens holder “16”, Figure 5) while allowing movement in an axial direction (Column 3, line 3-Column 4, line 20, wherein the cam followers “42” slide within openings “60” and allow at least an inner portion of carrier “22” to slide along an inner surface of the lens holder “16”, Figures 2 and 5), wherein the lens holder and the foot are connected by a snap connection (Column 3, line 3-Column 4, line 20, wherein the cam followers “42” fit within T openings “60” in a snap connection to fix a rotational position of the carrier “22” within lens holder “16”, Figure 5), wherein a coupling structure comprises a flange (Figure 5, wherein the flanges are the ridges of ribs “42”) on the foot (“22”) as well as a flange on the lens holder (Column 3, line 3-Column 4, line 20, wherein the flange on the lens holder comprises ramps “44” of a focusing ring portion of the lens holder, Figures 2 and 5), wherein both flanges comprise a contact surface (Figure 2, wherein the ramps “44” abut against the ridges of ribs “42”), and wherein the contact surfaces abut against each other when the lens is at a maximum axial distance from the image sensor chip (Figures 2 and 5).

Regarding claim 17, Randmac ‘919 further discloses that the lens holder has a wall and a base defining an inner volume (Column 2, lines 41-59, wherein the lens holder “16” comprises an inner wall including inner threads “18” and a base comprising the most leftward portion of

Art Unit: 2873

lens mount “16”, Figures 2 and 5), wherein the base has an opening therethrough (Shown in Figures 2 and 5), and wherein the lens is positioned in the inner volume of the lens holder against the base and adjacent to the opening (Column 2, lines 41-59, wherein the lens, not shown, is held in the inner wall and adjacent to the opening by threads “18”, Figures 2 and 5).

Regarding claim 18, Randmae ‘919 further discloses that the foot slides along an inner surface of the lens holder while being prevented from any rotation with respect to the lens holder by a coupling structure (Column 3, line 3-Column 4, line 20, wherein the cam followers “42” slide within openings “60” and allow at least an inner portion of carrier “22” to slide along an inner surface of the lens holder “16”, without rotation of the foot “22” with respect to lens holder “16”, Figures 2 and 5).

Regarding claims 3 and 19, Randmae ‘919 further discloses that the locking structure comprise at least one rib (Figure 5, wherein the ribs are cam followers “42” on carrier “22”), provided on one of the foot and the lens holder, as well as at least one slot (Figure 5, wherein the slots are openings “60” of lens holder “16”) for receiving and retaining the rib (“42”), provided in another of the foot and the lens holder.

Regarding claims 9 and 20, Randmae ‘919 further discloses that the imaging module comprises a biasing structure (Column 3, line 3-Column 4, line 20, wherein the biasing structure is spring “50”, Figure 5) for biasing the lens holder and the foot to a maximum axial distance with respect to each other (Figures 2 and 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2873

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Randmac '919, as applied to independents claim 1 and 16 above.

Regarding claim 10, Randmac '919 discloses an imaging module (Abstract), comprising: a lens holder (Column 2, lines 41-52, wherein the lens holder is "16", Figure 5) holding a lens (Figure 5, wherein the lens holder "16" holds a lens, not labeled); a foot (Column 2, lines 53-59, wherein the foot is carrier "22", Figure 5) holding an image sensor chip ("20", Figure 5); and a locking structure (Column 3, line 3-Column 4, line 20, wherein the locking structure comprise cam followers "42" of carrier "22" and openings "60" of lens holder "16", Figure 5) for fixing a mutual position of the lens holder ("16") and the foot ("22") with respect to each other in at least one direction (Column 3, line 3-Column 4, line 20, wherein the cam followers "42" and openings "60" fix the position of the carrier "22" with respect to the lens holder "16", Figure 5) while allowing movement in an axial direction (Column 3, line 3-Column 4, line 20, wherein the cam followers "42" slide within openings "60" and allow at least an inner portion of carrier "22" to slide along an inner surface of the lens holder "16", Figures 2 and 5), wherein the lens holder has a wall and a base defining an inner volume (Column 2, lines 41-59, wherein the lens holder "16" comprises an inner wall including inner threads "18" and a base comprising the most leftward portion of lens mount "16", Figures 2 and 5), wherein the base has an opening therethrough (Shown in Figures 2 and 5), and wherein the lens is positioned in the inner volume of the lens holder against the base and adjacent to the opening (Column 2, lines 41-59, wherein the lens, not shown, is held in the inner wall and adjacent to the opening by threads "18", Figures 2 and 5),

Art Unit: 2873

but does not specifically disclose that the module is used in a mobile phone. However, it is well known in the art of cameras for cameras (imaging modules) to be used in mobile phones for the purpose of providing a user with a compact, portable camera that can be easily stored and transported. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the imaging module of Randmae '919 to be used in a mobile phone since it is well known in the art of cameras for cameras (imaging modules) to be used in mobile phones for the purpose of providing a user with a compact, portable camera that can be easily stored and transported.

Regarding claim 11, Randmae '919 further discloses that the lens holder and the foot are prevented from any rotation with respect to each other by a coupling structure (Column 3, line 3-Column 4, line 20, wherein the cam followers "42" slide within openings "60" and allow at least an inner portion of carrier "22" to slide along an inner surface of the lens holder "16", without rotation of the foot "22" with respect to lens holder "16", Figures 2 and 5).

Regarding claim 12, Randmae '919 further discloses that the locking structure comprise at least one rib (Figure 5, wherein the ribs are cam followers "42" on carrier "22"), provided on one of the foot and the lens holder, as well as at least one slot (Figure 5, wherein the slots are openings "60" of lens holder "16") for receiving and retaining the rib ("42"), provided in another of the foot and the lens holder.

Regarding claim 13, Randmae '919 further discloses that the device comprises a flange (Figure 5, wherein the flanges are the ridges of ribs "42") on the foot ("22") as well as a flange on the lens holder (Column 3, line 3-Column 4, line 20, wherein the flange on the lens holder comprises ramps "44" of a focusing ring portion of the lens holder, Figures 2 and 5), wherein

Art Unit: 2873

both flanges comprise a contact surface (Figure 2, wherein the ramps "44" abut against the ridges of ribs "42") and wherein the contact surfaces abut against each other when the lens is at a maximum axial distance from the image sensor chip (Figures 2 and 5).

Regarding claim 14, Randmae '919 further discloses that the contact surface of at least one of the flanges is inclined with respect to a plane extending perpendicular to an axial direction (Figure 5, wherein the ramps "44" are inclined as claimed).

Regarding claim 15, Randmae '919 further discloses that the imaging module comprises a biasing structure (Column 3, line 3-Column 4, line 20, wherein the biasing structure is spring "50", Figure 5) for biasing the lens holder and the foot to a maximum axial distance with respect to each other (Figures 2 and 5).

Response to Arguments

Applicant's arguments filed December 17, 2007 have been fully considered but they are not persuasive.

Specifically, regarding claims 1-9, applicant argues that the Randmae reference does not disclose that the locking structure allows the foot to slide along an inner surface of the lens holder while preventing rotation of the foot with respect to the lens holder since the bearings slide when a focusing ring is turned. The examiner disagrees since Randmae discloses that the locking structure ("42" and "60") allows the foot ("22") to slide along an inner surface of the lens holder while preventing any rotation of the foot with respect to the lens holder (Column 3, line 3-Column 4, line 20, wherein the cam followers "42" slide within openings "60" and allow at least an inner portion of carrier "22" to slide along an inner surface of the lens holder "16", without rotation of the foot "22" with respect to lens holder "16", Figures 2 and 5). Additionally it is

Art Unit: 2873

claimed that rotation is prevented between the foot and the lens holder, not between the foot and a focusing ring.

Regarding independent claim 10, applicant argues that Randmae does not disclose the lens holder having a wall and a base defining an inner volume, wherein the base has an opening therethrough, and wherein the lens is positioned in the inner volume of the lens holder against the base and adjacent the opening. The examiner disagrees since Randmae discloses that the lens holder has a wall and a base defining an inner volume (Column 2, lines 41-59, wherein the lens holder "16" comprises an inner wall including inner threads "18" and a base comprising the most leftward portion of lens mount "16", Figures 2 and 5), wherein the base has an opening therethrough (Shown in Figures 2 and 5), and wherein the lens is positioned in the inner volume of the lens holder against the base and adjacent to the opening (Column 2, lines 41-59, wherein the lens, not shown, is held in the inner wall and adjacent to the opening by threads "18", Figures 2 and 5).

Regarding claims 16-20, applicant argues that Randmae does not disclose the lens holder and foot being connected by a snap connection, wherein the coupling structure comprises a flange on the foot as well as a flange on the lens holder, wherein both flanges comprise a contact surface and wherein the contact surfaces abut against each other when the lens is at a maximum axial distance from the image sensor chip. The examiner disagrees since Randmae disclose that the lens holder and the foot are connected by a snap connection (Column 3, line 3-Column 4, line 20, wherein the cam followers "42" fit within T openings "60" in a snap connection to fix a rotational position of the carrier "22" within lens holder "16", Figure 5), wherein a coupling structure comprises a flange (Figure 5, wherein the flanges are the ridges of ribs "42") on the

Art Unit: 2873

foot ("22") as well as a flange on the lens holder (Column 3, line 3-Column 4, line 20, wherein the flange on the lens holder comprises ramps "44" of a focusing ring portion of the lens holder, Figures 2 and 5), wherein both flanges comprise a contact surface (Figure 2, wherein the ramps "44" abut against the ridges of ribs "42"), and wherein the contact surfaces abut against each other when the lens is at a maximum axial distance from the image sensor chip (Figures 2 and 5).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica T. Stultz whose telephone number is (571) 272-2339. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jessica T Stultz
Primary Examiner
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